

Product Name  
LC201C, LC203C, LC205C, LC210C, LC211C, LC213C, LC215C, LC221C, LC223C, LC225XLC, LC231C, LC233C, LC235XLC, LC261C,  
LC263C, LC605C, LC625C, LC635C, LC645C, LC663C, LC665XLC, LC683C, LC685XLC, LC695XLC

First Issue: Sep. 26, 2013  
Revised:-  
Version Number: 1  
SDS No.: BHC026

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

Product Name:	LC201C	LC203C	LC205C	LC210C	LC211C	LC213C	LC215C	LC221C
Product Code:		LK7747001	LK8309001					
Product Name:	LC223C	LC225XLC	LC231C	LC233C	LC235XLC	LC261C	LC263C	LC605C
Product Code:	LK8387001	LK8419001						
Product Name:	LC625C	LC635C	LC645C	LC663C	LC665XLC	LC683C	LC685XLC	LC695XLC
Product Code:								

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified use(s): Cartridge contained water based ink for inkjet printing machine

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer:** BROTHER INDUSTRIES, LTD.  
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information : +81-52-824-3445

**Importer (Europe):** BROTHER INTERNATIONAL EUROPE LTD.  
Brother House, 1 Tame Street, Audenshaw, Manchester  
M34 5JE, UK  
Telephone Number for Information : +44-161-330-6531

**Importer (USA):** BROTHER INTERNATIONAL CORPORATION  
100 Somerset Corporate Boulevard, Bridgewater,  
NJ 08807-0911, USA  
Telephone Number for Information : +1-908-704-1700

**Importer (Canada):** BROTHER INTERNATIONAL CORPORATION (Canada) LTD.  
1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA  
Telephone Number for Information : +1-514-685-0600

**Importer (Australia):** BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835  
Level 3, Building A, 11 Talavera Road Macquarie Park, N.S.W. 2113,  
AUSTRALIA  
Telephone Number for Information : +61-2-9887-4344

**E-Mail (competent person):** sds.ieink@brother.co.jp

**1.4 Emergency telephone number**

Emergency Phone No. (24 hours) We do not provide 24 hours cover for information contact.  
Please telephone to the above office during our business hours.

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**EU Classification:** Ink is not classified according to EU-Directive 1999/45/EC.

**2.2 Label elements**

Label elements according to EU Directive 1999/45/EC.: None

**2.3 Other hazards**

None

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

CHEMICAL NAME	CAS No.	EC No.	% by weight	EU Symbol	EU Risk Phrases
Glycerol	56-81-5	200-289-5	10 - 20	Not classified	Not classified
Diethylene glycol	111-46-6	203-872-2	1 - 9	Xn	R22
Triethylene glycol monobutyl ether	143-22-6	205-592-6	1 - 5	Xi	R41
Cyan Dye	Registered	Registered	1 - 8	Not classified	Not classified
Water	7732-18-5	231-791-2	65 - 75	Not classified	Not classified

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

Inhalation: Remove to fresh air area and obtain medical attention immediately.

Skin Contact: Wash with water and soap. If irritation continues, obtain medical attention.

Eye Contact: Flush immediately with gentle running water for 15 minutes at least. If irritation continues, obtain medical attention.

Ingestion: Rinse mouth with water, give one or two of glasses of water, and obtain

Product Name  
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- 4.2 **Most important symptoms and effects, both acute and delayed** medical attention immediately.  
Inhalation: No harmful effects are expected under normal use. Over exposure to vapor or mist, may cause symptoms such as respiratory irritation, cough, dizziness, headache and nausea.
- 4.3 **Indication of any immediate medical attention and special treatment needed** None

**SECTION 5: FIRE-FIGHTING MEASURES**

- 5.1 **Extinguishing media**  
Suitable Extinguishing Media: Water, CO<sub>2</sub>, Foam, Dry chemical.  
Unsuitable Extinguishing Media: None.
- 5.2 **Special hazards arising from the substance or mixture** May produce toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides if burning.
- 5.3 **Advice for fire-fighters** Use self-contained breathing apparatus.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

- 6.1 **Personal precautions, protective equipment and emergency procedures** Avoid contact with eyes, skin and clothing.
- 6.2 **Environmental precautions** Do not release to surface water or ground water.
- 6.3 **Methods and material for containment and cleaning up** Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink.
- 6.4 **Reference to other sections** See Section: 8.

**SECTION 7: HANDLING AND STORAGE**

- 7.1 **Precautions for safe handling** Avoid contact with skin, eyes and clothing.
- 7.2 **Conditions for safe storage, including any incompatibilities** Keep out of reach of children. Store in a cool and dark place.
- 7.3 **Specific end use(s)** Cartridge contained water based ink for inkjet printing machine

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- 8.1 **Control parameters**  
**Occupational Exposure Limits:**

CHEMICAL NAME	OSHA PEL	ACGIH TLV	EU IOELV
Glycerol	(as mist) Total dust TWA 15mg/m <sup>3</sup>	(as mist) TWA 10mg/m <sup>3</sup>	Not established

- 8.2 **Exposure controls**  
**Appropriate engineering controls** Use in a ventilated area.  
**Personal Protection**  
Eye/face protection Not required under normal use.  
Skin protection Not required under normal use.  
Hand protection Not required under normal use.  
Respiratory protection Not required under normal use.  
Other: Not applicable.  
**Environmental Exposure Controls** Avoid release to the environment.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

- 9.1 **Information on basic physical and chemical properties**  
Appearance (20 °C) Dark blue liquid  
Odor Slight odor  
Odor threshold (ppm) Not available  
pH (Value) 7 – 9  
Melting point (°C) / Freezing point (°C) Melting point(°C) : <-5°C  
Boiling point/boiling range (°C) Boiling point(°C) : >100°C  
Flash point (°C) Does not flash at 93.3°C or lower  
(Tag closed cup & Cleveland opened cup)

Product Name

LC201C, LC203C, LC205C, LC210C, LC211C, LC213C, LC215C, LC221C, LC223C, LC225XLC, LC231C, LC233C, LC235XLC, LC261C, LC263C, LC605C, LC625C, LC635C, LC645C, LC663C, LC665XLC, LC683C, LC685XLC, LC695XLC

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Evaporation rate	Not available
Flammability (solid, gas)	LEL : Not available UEL : Not available
Explosive limit ranges	Not available
Vapor pressure (Pa)	Not available
Vapor density (Air=1)	Not available
Density (g/cm <sup>3</sup> )	1.0 – 1.1 g/ml
Solubility (Water)	Soluble
Solubility (Other)	Not available
Partition coefficient (n-Octanol/water)	Not available
Auto ignition point (°C)	>400°C
Decomposition temperature (°C)	Not available
Viscosity (mPa. s)	2 – 5 mPa.s
Explosive properties	Not available
Oxidising properties	Not available
<b>9.2 Other information</b>	Not available

**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	None
<b>10.2 Chemical stability</b>	Stable
<b>10.3 Possibility of hazardous reactions</b>	Will not occur
<b>10.4 Conditions to avoid</b>	High-temperature or High-humidity
<b>10.5 Incompatible materials</b>	Acids, Bases, Oxidizing agents, Reducing agents
<b>10.6 Hazardous Decomposition Product(s)</b>	Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity (oral):</b>	LD <sub>50</sub> of ink is greater than 2000mg/kg.
<b>Skin corrosion/irritation:</b>	Ink is classified as a NON IRRITANT
<b>Serious eye damage/irritation:</b>	Ink is classified as a MINIMAL IRRITANT
<b>Respiratory or skin sensitization:</b>	Respiratory sensitization : Not available Skin sensitization : Non-sensitizer
<b>Mutagenicity:</b>	Ames test : Negative
<b>Carcinogenicity:</b>	Ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.
<b>Reproductive toxicity:</b>	Not available
<b>STOT-single exposure:</b>	Not available
<b>STOT-repeated exposure:</b>	Not available
<b>Aspiration hazard:</b>	Not available
<b>Potential Health Effects:</b>	Eye : Ink may cause slight irritation. Skin : Prolonged exposure to ink may cause irritation. Ingestion : Ink may cause gastrointestinal or other adverse effects. Inhalation : Not expected to be a route of exposure under normal use. Over exposure may cause respiratory irritation.

**SECTION 12: ECOLOGICAL INFORMATION**

<b>12.1 Toxicity</b>	Not available
<b>12.2 Persistence and degradability</b>	Not available
<b>12.3 Bioaccumulative potential</b>	Not available
<b>12.4 Mobility in soil</b>	Not available
<b>12.5 Results of PBT and vPvB assessment</b>	Not available
<b>12.6 Other adverse effects</b>	Not available

**SECTION 13: DISPOSAL CONSIDERATIONS**

<b>13.1 Waste treatment methods</b>	Dispose in accordance with federal, state and local regulations.
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**SECTION 14: TRANSPORT INFORMATION**

<b>14.1 UN number</b>	None
<b>14.2 Proper Shipping Name</b>	None
<b>14.3 Transport hazard class(es)</b>	None

Product Name  
LC201C, LC203C, LC205C, LC210C, LC211C, LC213C, LC215C, LC221C, LC223C, LC225XLC, LC231C, LC233C, LC235XLC, LC261C,  
LC263C, LC605C, LC625C, LC635C, LC645C, LC663C, LC665XLC, LC683C, LC685XLC, LC695XLC

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<b>14.4 Packing Group</b>	None
US Department of Transportation (DOT) :	Not regulated as dangerous goods.
Maritime Transport IMDG :	Not regulated as dangerous goods.
Air Transport ICAO/IATA :	Not regulated as dangerous goods.
<b>14.5 Environmental hazards</b>	Not available
<b>14.6 Special precautions for user</b>	None
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable

**SECTION 15: REGULATORY INFORMATION**

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	EU : All components in ink comply with REACH rules and regulations. Ink is not classified according to EU-Directive 1999/45/EC. US : All components in ink comply with TSCA rules and regulations. Canada : WHMIS : Not applicable. (Manufactured article)
<b>15.2 Chemical Safety Assessment</b>	None

**SECTION 16: OTHER INFORMATION**

<b>Hazard Symbol:</b>	Xn: Harmful Xi : Irritant
<b>Risk Phrases:</b>	R22 : Harmful if swallowed. R41 : Risk of serious damage to eyes.
<b>Issue Date:</b>	Sep. 26, 2013
<b>The following sections contain revisions or new statements:</b>	section 1
<b>Additional information:</b>	The information only relates to this specific ink cartridge. It may not be valid for this ink cartridge, if used in combination with any other materials or in any other process. And it is based on our best knowledge as of the date of preparation (revision).
<b>References:</b>	World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risks to Humans, Volume 93 EU Directive 1999/45/EC U.S. Department of labor, 29CFR Part 1910. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices EU Commission Directive 2009/161/EU
<b>Abbreviations:</b>	ACGIH: American Conference of Governmental Industrial Hygienists DOT: Department Of Transportation (US) IARC: International Agency for Research on Cancer IATA: International Air Transport Association ICAO: International Civil Aviation Organization IMDG: International Maritime Dangerous Goods IOELV: Indicative Occupational Exposure Limit Value NTP: National Toxicology Program (US) OSHA: Occupational Safety and Health Administration (US) PEL: Permissible Exposure Limit REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (EU) TLV: Threshold Limit Value(ACGIH) TSCA: Toxic Substances Control Act (US) WHMIS: Workplace Hazardous Material Information System (Canada)

Product Name  
LC201M, LC203M, LC205M, LC210M, LC211M, LC213M, LC215M, LC221M, LC223M, LC225XLM, LC231M, LC233M, LC235XLM, LC261M, LC263M, LC605M, LC625M, LC635M, LC645M, LC663M, LC665XLM, LC683M, LC685XLM, LC695XLM,

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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

Product Name:	LC201M	LC203M	LC205M	LC210M	LC211M	LC213M	LC215M	LC221M
Product Code:		LK7748001	LK8310001					
Product Name:	LC223M	LC225XLM	LC231M	LC233M	LC235XLM	LC261M	LC263M	LC605M
Product Code:	LK8388001	LK8420001						
Product Name:	LC625M	LC635M	LC645M	LC663M	LC665XLM	LC683M	LC685XLM	LC695XLM
Product Code:								

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified use(s): Cartridge contained water based ink for inkjet printing machine

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer:** BROTHER INDUSTRIES, LTD.  
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information : +81-52-824-3445

**Importer (Europe):** BROTHER INTERNATIONAL EUROPE LTD.  
Brother House, 1 Tame Street, Audenshaw, Manchester M34 5JE, UK  
Telephone Number for Information : +44-161-330-6531

**Importer (USA):** BROTHER INTERNATIONAL CORPORATION  
100 Somerset Corporate Boulevard, Bridgewater, NJ 08807-0911, USA  
Telephone Number for Information : +1-908-704-1700

**Importer (Canada):** BROTHER INTERNATIONAL CORPORATION (Canada) LTD.  
1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA  
Telephone Number for Information : +1-514-685-0600

**Importer (Australia):** BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835  
Level 3, Building A, 11 Talavera Road Macquarie Park, N.S.W. 2113, AUSTRALIA  
Telephone Number for Information : +61-2-9887-4344

**E-Mail (competent person):** sds.ieink@brother.co.jp

**1.4 Emergency telephone number**

Emergency Phone No. (24 hours) We do not provide 24 hours cover for information contact.  
Please telephone to the above office during our business hours.

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**EU Classification:** Ink is not classified according to EU-Directive 1999/45/EC.

**2.2 Label elements**

Label elements according to EU Directive 1999/45/EC.: None

**2.3 Other hazards**

None

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

CHEMICAL NAME	CAS No.	EC No.	% by weight	EU Symbol	EU Risk Phrases
Glycerol	56-81-5	200-289-5	10 - 20	Not classified	Not classified
Magenta Dye	Registered	Registered	< 2.5	N	R51/53
Water	7732-18-5	231-791-2	65 - 80	Not classified	Not classified

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

Inhalation:	Remove to fresh air area and obtain medical attention immediately.
Skin Contact:	Wash with water and soap. If irritation continues, obtain medical attention.
Eye Contact:	Flush immediately with gentle running water for 15 minutes at least. If irritation continues, obtain medical attention.
Ingestion:	Rinse mouth with water, give one or two of glasses of water, and obtain medical attention immediately.

**4.2 Most important symptoms and effects, both acute and delayed**

Inhalation: No harmful effects are expected under normal use. Over exposure to vapor or mist, may cause symptoms such as respiratory irritation, cough, dizziness, headache and nausea.

**4.3 Indication of any immediate medical attention and special treatment needed** None

**SECTION 5: FIRE-FIGHTING MEASURES**

**5.1 Extinguishing media**  
Suitable Extinguishing Media: Water, CO<sub>2</sub>, Foam, Dry chemical.  
Unsuitable Extinguishing Media: None.

**5.2 Special hazards arising from the substance or mixture** May produce toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides if burning.

**5.3 Advice for fire-fighters** Use self-contained breathing apparatus.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures** Avoid contact with eyes, skin and clothing.

**6.2 Environmental precautions** Do not release to surface water or ground water.

**6.3 Methods and material for containment and cleaning up** Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink.

**6.4 Reference to other sections** See Section: 8.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling** Avoid contact with skin, eyes and clothing.

**7.2 Conditions for safe storage, including any incompatibilities** Keep out of reach of children. Store in a cool and dark place.

**7.3 Specific end use(s)** Cartridge contained water based ink for inkjet printing machine

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

**Occupational Exposure Limits:**

CHEMICAL NAME	OSHA PEL	ACGIH TLV	EU IOELV
Glycerol	(as mist) Total dust TWA 15mg/m <sup>3</sup>	(as mist) TWA 10mg/m <sup>3</sup>	Not established

**8.2 Exposure controls**

**Appropriate engineering controls** Use in a ventilated area.

**Personal Protection**

Eye/face protection Not required under normal use.

Skin protection Not required under normal use.

Hand protection Not required under normal use.

Respiratory protection Not required under normal use.

Other: Not applicable.

**Environmental Exposure Controls** Avoid release to the environment.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

Appearance (20 °C) Dark red liquid

Odor Slight odor

Odor threshold (ppm) Not available

pH (Value) 7 – 9

Melting point (°C) / Freezing point (°C) Melting point(°C) : <-5°C

Boiling point/boiling range (°C) Boiling point(°C) : >100°C

Flash point (°C) Does not flash at 93.3°C or lower (Tag closed cup & Cleveland opened cup)

Evaporation rate Not available

Flammability (solid, gas) LEL : Not available UEL : Not available

Explosive limit ranges Not available

Vapor pressure (Pa) Not available

Product Name

LC201M, LC203M, LC205M, LC210M, LC211M, LC213M, LC215M, LC221M, LC223M, LC225XLM, LC231M, LC233M, LC235XLM, LC261M, LC263M, LC605M, LC625M, LC635M, LC645M, LC663M, LC665XLM, LC683M, LC685XLM, LC695XLM,

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Vapor density (Air=1)	Not available
Density (g/cm <sup>3</sup> )	1.0 – 1.1 g/ml
Solubility (Water)	Soluble
Solubility (Other)	Not available
Partition coefficient (n-Octanol/water)	Not available
Auto ignition point (°C)	>400°C
Decomposition temperature (°C)	Not available
Viscosity (mPa. s)	2 – 5 mPa.s
Explosive properties	Not available
Oxidising properties	Not available
<b>9.2 Other information</b>	Not available

## SECTION 10: STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	None
<b>10.2 Chemical stability</b>	Stable
<b>10.3 Possibility of hazardous reactions</b>	Will not occur
<b>10.4 Conditions to avoid</b>	High-temperature or High-humidity
<b>10.5 Incompatible materials</b>	Acids, Bases, Oxidizing agents, Reducing agents
<b>10.6 Hazardous Decomposition Product(s)</b>	Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity (oral):</b>	LD <sub>50</sub> of ink is greater than 2000mg/kg.
<b>Skin corrosion/irritation:</b>	Ink is classified as a NON IRRITANT
<b>Serious eye damage/irritation:</b>	Ink is classified as a MINIMAL IRRITANT
<b>Respiratory or skin sensitization:</b>	Respiratory sensitization : Not available Skin sensitization : Non-sensitizer
<b>Mutagenicity:</b>	Ames test : Negative
<b>Carcinogenicity:</b>	Ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.
<b>Reproductive toxicity:</b>	Not available
<b>STOT-single exposure:</b>	Not available
<b>STOT-repeated exposure:</b>	Not available
<b>Aspiration hazard:</b>	Not available
<b>Potential Health Effects:</b>	Eye : Ink may cause slight irritation. Skin : Prolonged exposure to ink may cause irritation. Ingestion : Ink may cause gastrointestinal or other adverse effects. Inhalation : Not expected to be a route of exposure under normal use. Over exposure may cause respiratory irritation.

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1 Toxicity</b>	Not available
<b>12.2 Persistence and degradability</b>	Not available
<b>12.3 Bioaccumulative potential</b>	Not available
<b>12.4 Mobility in soil</b>	Not available
<b>12.5 Results of PBT and vPvB assessment</b>	Not available
<b>12.6 Other adverse effects</b>	Not available

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	Dispose in accordance with federal, state and local regulations.
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## SECTION 14: TRANSPORT INFORMATION

<b>14.1 UN number</b>	None
<b>14.2 Proper Shipping Name</b>	None
<b>14.3 Transport hazard class(es)</b>	None
<b>14.4 Packing Group</b>	None

US Department of Transportation (DOT) : Not regulated as dangerous goods.

Product Name  
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Maritime Transport IMDG :	Not regulated as dangerous goods.
Air Transport ICAO/IATA :	Not regulated as dangerous goods.
<b>14.5 Environmental hazards</b>	Not available
<b>14.6 Special precautions for user</b>	None
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable

**SECTION 15: REGULATORY INFORMATION**

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	EU : All components in ink comply with REACH rules and regulations. Ink is not classified according to EU-Directive 1999/45/EC. US : All components in ink comply with TSCA rules and regulations. Canada : WHMIS : Not applicable. (Manufactured article)
<b>15.2 Chemical Safety Assessment</b>	None

**SECTION 16: OTHER INFORMATION**

<b>Hazard Symbol:</b>	N ; Dangerous for the environment
<b>Risk Phrases:</b>	R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Issue Date:</b>	Sep. 26, 2013
<b>The following sections contain revisions or new statements:</b>	section 1
<b>Additional information:</b>	The information only relates to this specific ink cartridge. It may not be valid for this ink cartridge, if used in combination with any other materials or in any other process. And it is based on our best knowledge as of the date of preparation (revision).
<b>References:</b>	World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risks to Humans, Volume 93 EU Directive 1999/45/EC U.S. Department of labor, 29CFR Part 1910. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices EU Commission Directive 2009/161/EU
<b>Abbreviations:</b>	ACGIH: American Conference of Governmental Industrial Hygienists DOT: Department Of Transportation (US) IARC: International Agency for Research on Cancer IATA: International Air Transport Association ICAO: International Civil Aviation Organization IMDG: International Maritime Dangerous Goods IOELV: Indicative Occupational Exposure Limit Value NTP: National Toxicology Program (US) OSHA: Occupational Safety and Health Administration (US) PEL: Permissible Exposure Limit REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (EU) TLV: Threshold Limit Value(ACGIH) TSCA: Toxic Substances Control Act (US) WHMIS: Workplace Hazardous Material Information System (Canada)

Product name: LC201Y, LC203Y, LC205Y, LC211Y, LC213Y,  
LC215Y, LC221Y, LC223Y, LC225XLY, LC231Y, LC233Y,  
LC235XLY, LC261Y, LC263Y, LC645Y, LC663Y, LC665XLY,  
LC673Y, LC675XLY, LC695XLY Ink

Date of issue: 26 September 2013  
Revision date: 3 March 2015  
Version: 4.0  
SDS No: BHY026-01-EUUSOTHER

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product Name (Product code) : LC201Y (LK9291001), LC203Y (LK7749001), LC205Y (LK8311001), LC211Y (LK9347001), LC213Y (LK8549001), LC215Y (LK8647001), LC221Y (LK9319001), LC223Y (LK8389001), LC225XLY (LK8421001), LC231Y, LC233Y, LC235XLY (LK8923001), LC261Y, LC263Y, LC645Y, LC663Y (LK8947001), LC665XLY (LK8971001), LC673Y (LK9079001), LC675XLY (LK9049001), LC695XLY

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : These products are dark yellow ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only consistent with the use specified by Brother

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Manufacturer Brother Industries, Ltd.  
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan  
Telephone (for information): +81-52-824-2735

Importer (USA) Brother International Corporation  
200 Crossing Boulevard, Bridgewater, NJ 08807, USA  
Telephone (for information): +1-877-276-8437

Importer (Canada) Brother International Corporation (Canada) Ltd.  
1 Hotel de Ville, Dollard des Ormeaux, Quebec, H9B 3H6, Canada  
Telephone (for information): +1-514-685-0600

Importer (Europe) Brother International Europe Ltd.  
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK  
Telephone (for information): +44-161-330-6531

Importer (Australia) Brother International (Aust.) Pty. Ltd. ACN 001 393 835  
Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia  
Telephone (for information): +61-2-9887-4344

E-mail Address sds.info@brother.co.jp

**1.4. Emergency telephone number**

Emergency number : CHEMTREC  
+1-703-527-3887 (International)  
+1-800-424-9300 (North America)

For France only:  
Antipoison Center telephone number: ORFILA +33-1-45-425-959

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

Not classified

**Australia Classification**

Not classified as hazardous according to the criteria of NOHSC

Product name: LC201Y, LC203Y, LC205Y, LC211Y, LC213Y,  
LC215Y, LC221Y, LC223Y, LC225XLY, LC231Y, LC233Y,  
LC235XLY, LC261Y, LC263Y, LC645Y, LC663Y, LC665XLY,  
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**2.2. Label elements**

**Labeling according to Regulation (EC) No. 1272/2008 [CLP]**

No labeling applicable

**2.3. Other hazards**

This substance/mixture does not meet the PBT criteria of REACH, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

**SECTION 3: Composition/information on ingredients**

**3.2. Mixture**

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
glycerol	(CAS No) 56-81-5 (EC no) 200-289-5	5-15	Not classified	Not classified
Triethylene glycol monobutyl ether	(CAS No) 143-22-6 (EC no) 205-592-6 (EC index no) 603-183-00-0	1-5	Xi; R41	Eye Dam. 1, H318
Yellow Dye	(CAS No) * (EC no) *	≤5	Not classified	Not classified
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	65-80	Not classified	Not classified

\*Registered

Full text of R- and H- phrases: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

- First-aid measures general : If symptoms persist, obtain medical attention.
- First-aid measures after inhalation : Obtain medical attention. In case of accident by inhalation : remove casualty to fresh air and keep at rest.
- First-aid measures after skin contact : Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.
- First-aid measures after eye contact : Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.
- First-aid measures after ingestion : Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

**4.2. Most important symptoms and effects, both acute and delayed**

- Symptoms/injuries after inhalation : Unlikely route of exposure.
- Symptoms/injuries after skin contact : Repeated and/or prolonged skin contact may cause irritation.
- Symptoms/injuries after eye contact : May cause eye irritation.
- Symptoms/injuries after ingestion : Ingestion may cause irritation of the gastrointestinal tract. Unlikely route of exposure.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

- Suitable extinguishing media : Extinguish preferably with dry chemical, carbon dioxide, water spray, foam.
- Unsuitable extinguishing media : None.

**5.2. Special hazards arising from the substance or mixture**

- Fire hazard : Thermal decomposition of organic components may result in occurrence of oxides of carbon.
- Hazardous decomposition products in case of fire : Toxic gases may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

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**5.3. Advice for firefighters**

Firefighting instructions : Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

No additional information available

**6.1.2. For emergency responders**

Emergency procedures : Ensure adequate ventilation. Avoid contact with eyes.

**6.2. Environmental precautions**

Prevent substance entering sewers. Washings must be prevented from entering surface water drains.

**6.3. Methods and material for containment and cleaning up**

For containment : Wipe up ink with absorbent towel.

Methods for cleaning up : Wash with water to remove remaining traces of ink.

**6.4. Reference to other sections**

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling : Keep out of the reach of children. Avoid contact with skin, eyes and clothing.

**7.2. Conditions for safe storage, including any incompatibilities**

Storage conditions : Keep away from oxidizing agents.

**7.3. Specific end use(s)**

Cartridge containing water based ink for inkjet printing machine.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

glycerol (56-81-5)		
Belgium	Local name	Glycérine (brouillard)
Belgium	Limit value (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Czech Republic	Local name	Glycerol, mlha
Czech Republic	Exposure limits (PEL) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Czech Republic	Exposure limits (PEL) (ppm)	2.4 ppm
Czech Republic	Exposure limits (NPK-P) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Czech Republic	Exposure limits (NPK-P) (ppm)	3.7 ppm
Finland	Local name	Glyseroli
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
France	Local name	Glycérine (aérosols de)
France	VME (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ireland	Local name	Glycerol, mist
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Poland	Local name	Glicerol aerozole
Poland	NDS (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Portugal	Local name	Glicerina, névoas
Portugal	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

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<b>glycerol (56-81-5)</b>		
United Kingdom	Local name	Glycerol, mist
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA - ACGIH	Local name	Glycerin mist
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> mist
USA - ACGIH	Remark (ACGIH)	URT irr
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> Total dust 5 mg/m <sup>3</sup> Respirable Fraction

## 8.2. Exposure controls

Appropriate engineering controls	: Good general ventilation should be sufficient under normal use.
Personal protective equipment	: Not normally required. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:
Hand protection	: protective gloves.
Eye protection	: Safety goggles.
Skin and body protection	: Long sleeved clothing and long pants.
Respiratory protection	: In case of large spillages: Wear suitable respiratory protective equipment.
Environmental exposure controls	: Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Dark yellow
Color	: Dark yellow
Odor	: Slight odor
Odor threshold	: No information available
pH	: 7 - 9
Relative evaporation rate (butyl acetate=1)	: No information available
Relative evaporation rate (ether=1)	: Not available
Melting point	: < 5 °C
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: Does not flash at 93.3°C or lower (Tag closed cup & Cleveland opened cup)
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: Not available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: Not available
Relative vapor density at 20 °C	: Not available
Relative density	: No data available
Specific gravity / density	: 1 - 1.1 g/ml
Solubility	: Soluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 2 - 5 mPa·s
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not available
Explosion limits	: Not available

Product name: LC201Y, LC203Y, LC205Y, LC211Y, LC213Y, LC215Y, LC221Y, LC223Y, LC225XLY, LC231Y, LC233Y, LC235XLY, LC261Y, LC263Y, LC645Y, LC663Y, LC665XLY, LC673Y, LC675XLY, LC695XLY Ink

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**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

Stable.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Carbon monoxide. Carbon dioxide.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity	: Not classified
LD <sub>50</sub> oral rat	> 2000 mg/kg (OECD 420 method)
Skin corrosion/irritation	: Non-irritant. (OECD 404 method) pH: 7 - 9
Serious eye damage/irritation	: Minimal irritant to the eye. (OECD 405 method) pH: 7 - 9
Respiratory or skin sensitization	: It is not a skin sensitizer. (OECD 429 method)
Germ cell mutagenicity	: Negative. (OECD 471 method)
Carcinogenicity	: Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

**SECTION 12: Ecological information**

**12.1. Toxicity**

<b>glycerol (56-81-5)</b>	
LC <sub>50</sub> fish	51 - 57 ml/l 96 h - Oncorhynchus mykiss
EC <sub>50</sub> Daphnia	> 500 mg/l 24 h - Daphnia magna
<b>Triethylene glycol monobutyl ether (143-22-6)</b>	
LC <sub>50</sub> fish	2200 - 4600 mg/kg 96 h - Leuciscus idus
LC <sub>50</sub> other aquatic organisms	2400 mg/kg 96 h - Pimephales promelas
EC <sub>50</sub> Daphnia	> 500 mg/l 48 h - Daphnia magna
EC <sub>50</sub> other aquatic organisms 1	> 500 mg/l 72 h - Desmodesmus subspicatus

**12.2. Persistence and degradability**

Persistence and degradability No information available.

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**12.3. Bioaccumulative potential**

<b>glycerol (56-81-5)</b>	
Log Pow	-1.76
<b>Triethylene glycol monobutyl ether (143-22-6)</b>	
Log Pow	0.51

**12.4. Mobility in soil**

Ecology - soil : No information available.

**12.5. Results of PBT and vPvB assessment**

This substance/mixture does not meet the PBT criteria of REACH, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII  
Results of PBT assessment : Not available

**12.6. Other adverse effects**

Other adverse effects : No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste disposal recommendations : Dispose in accordance with federal, state and local regulations.

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / DOT / UN

**14.1. UN number**

Not regulated for transport

**14.2. UN proper shipping name**

Proper Shipping Name (ADR/RID) : None  
Proper Shipping Name (IATA) : None  
Proper Shipping Name (IMDG) : None

**14.3. Transport hazard class(es)**

Not applicable

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Other information : None

**14.6. Special precautions for user**

Special transport precautions : None

**14.6.1. Overland transport**

No additional information available

**14.6.2. Transport by sea**

No additional information available

**14.6.3. Air transport**

No additional information available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

IBC code : Not applicable

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## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

#### 15.1.2. National regulations

Regional legislation

: EU: Not classified as dangerous for supply/use. (1999/45/EC)

USA: All chemical substances contained in this product are and had been listed on the TSCA Chemical Substances Inventory, and none is subject to any of the following TSCA requirements: section 4 test rules; proposed or final section 5(a)(2) significant new use rules; section 5(e) consent orders; section 8(a) preliminary assessment information rules; and section 8(d) health and safety data reporting rules.

Canada: WHMIS: Not applicable. (Manufactured article).

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:  
SECTION 3.

Data sources

: U.S. 29CFR Part 1910  
ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices  
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans World Health Organization  
EU Directive 91/322/EEC and 2000/39/EC  
NTP 11th Report on Carcinogens.

Abbreviations and acronyms

: IARC (International Agency for Research on Cancer)  
IATA (International Air Transport Association)  
IMDG (International Maritime Dangerous Goods Code)  
IOELV (Indicative Occupational Exposure Limit)  
REACH (Registration, Evaluation and Authorisation of Chemicals)  
WHMIS (Workplace Hazardous Material Information System (Canada))  
ACGIH (American Conference of Government Industrial Hygienists)  
DOT (Department Of Transportation (US))  
ICAO (International Civil Aviation Organization)  
NOHSC (National Occupational Health and Safety Commission (Australia))  
NTP (National Toxicology Program) (US)  
OSHA (Occupational Safety and Health Administration) (US)  
PEL (Permissible Exposure Limit)  
TLV (Threshold Limit Value) (ACGIH)  
TSCA (Toxic Substances Control Act) (US)  
TWA (Time Weighted Average).

Other information

: The information only relates to this specific product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).

Full text of R-, H- and EUH-phrases:

Eye Dam. 1	Serious eye damage/eye irritation Category 1
H318	Causes serious eye damage
R41	Risk of serious damage to eyes
Xi	Irritant